REMARKS

In paragraph 1 of the office action, the Examiner reports that claims 1-24 have been submitted for examination. In this Response the applicant amends claims 1 and 10, and rewrites claims 22 and 24 into independent form. Accordingly, claims 1-24 are still pending in this application.

Response to Objection of Claim 10

In paragraph 2 of the office action, the Examiner objects to claim 10 as having an extraneous "the". In response the applicant amends claim 10 to remove the extra "the" as suggested by the Examiner.

Response to Rejection of Claims 1-12, 15-21, and 23

In paragraphs 3 and 4 of the office action, the Examiner rejects claims 1-12, 15-21, and 23 under 35 USC §103(a) as being unpatentable over Carnegie Mellon Univ. "*Software Engineering Institute Special Report*" (Carnegie) in view of US patent no. 6,073,107 (Minkiewicz). Applicant respectfully traverses this rejection, and submits that Carnegie and Minkiewicz fail to disclose all the elements of claim 1. Although the applicant believes that original claim 1 is patentably distinguishable from the cited references, the applicant makes two minor clarifications to claim 1. First, the applicant makes clear that "choosing" includes

"choosing <u>each of</u> a project type, a lifecycle, and a standard". As stated in the Specification, pg 11, lns 12-14:

> In a particularly important feature, the software manager is able to select project type 12, lifecycle 14, and standard 16 independently.

The second minor clarification makes clear that the type factor, the lifecycle factor, and the standard factors are used as <u>independent</u> variables in the parametric rule. As stated in the Specification, pg 11, lns 14-18:

> In this regard, the software manager is enabled to determine the resource impact of adjusting any one of project type 12, lifecycle 14, or standard 16. Such flexibility enable the software manager to accurately and efficiently use estimating method 10 to manage resource allocation for a software development program.

The applicant respectfully submits that not all elements of claim 1 can be found in Carnegie and Minkiewicz, either alone or in combination. For example, neither reference has a step of "choosing each of a project type, a lifecycle, and a standard", as recited in claim 1. Instead, the references both disclose and teach estimation processes as discussed in the Background section of this application. Known processes are more fully described in the Background, pg. 3, lns. 15 - pg. 4. ln. 15:

> Generally, each project type also has a related software lifecycle and a related software standard. In a known estimating system, a software lifecycle typically uses the results from the parametric equation to more fully define a work breakdown structure. In such a typical parametric resource estimating system,

the software lifecycle related with the project type defines a detailed task or action list, typically with a cost and time associated with each task. In a similar manner, each project type in a known estimating system generally has an associated software standard. The software standard generally defines documentation required during the various phases of the software development project.

. . .

As generally described, the software manager generally uses the known parametric estimating system by first selecting a project type. In response, the parametric resource estimating system generates preliminary resource usage information. The known parametric resource estimating system then applies the software lifecycle and software standard for the selected project type. In this regard, the estimating system is able to generate a cost estimate, a detailed schedule, and comprehensive list of required documents.

Although the Examiner finds the "choosing" limitation in Carnegie, the applicant respectfully submits that the Examiner has not fully and properly characterized the disclosure present in Carnegie. For example, the cited portions of Carnegie are used by the Examiner to show that a project type, lifecycle, and standard are chosen in Carnegie. However, the cited sections do not show that the three factors are chosen, but merely that software may be developed according to known lifecycles, or require documentation consistent with a particular standard. For example, figure 6-6 of Carnegie does not show that the lifecycle is chosen for a parametric rule, but merely that software proceeds

through a series of maturity levels. The cited portions do not show that the disclosed parametric models permit the choosing of <u>each</u> of the factors.

When Carnegie does discuss parametric models, it does so consistent with known prior processes.

> "Parametric estimating techniques for software projects generally estimate overall system or CSCI costs based on a software program's design characteristics. These overall costs can be partitioned among the lower-level SU's or life cycle phases."
> *Carnegie, pg. 14 lns. 21-25.*

Carnegie goes on to discuss three parametric models (COCOMO, PRICE, and SEER-SEM) in more detail. *Carnegie, pg. 14 lns. 35-38.* In basic COCOMO, only a single parameter effort is used, and so can not support the choosing of type, lifecycle, and standard as recited in claim 1. *See, Carnegie, pg. 15 lns. 15-17.* For COCOM81, the primary input is program size, and the other attributes are classified into four categories: product attributes, computer attributes, personnel attributes, and project attributes. *Carnegie, pg. 16.* None of these attributes disclose, for example, choosing a standard, or adjusting effort responsive to choosing a different lifecycle. In a similar manner, the equations for COCOMO II are described, and attributes described, but do not disclose choosing type, lifecycle, and standard. *See, Carnegie, pg. 19.*

The equations for PRICE are described, and attributes described, but do not disclose choosing type, lifecycle, and standard. *See, Carnegie, pg. 24.* For example, labor hours are calculated responsive to a productivity factor

(PROFAC) and a volume (VOL) of software, which is calculated from size an the specific category (APPL) into which the software falls. The equations for COCOMO II are described, and attributes described, but do not disclose choosing type, lifecycle, and standard. *See, Carnegie, pgs. 23-24.* And finally, Carnegie discusses the SEER-S model, where "knowledge bases assign default values to input parameters". *Carnegie, pgs. 25, ln. 30-33.* Since the parameters are set responsive to information from the knowledge base, these do not disclose choosing each of a type, lifecycle, and standard.

Minkiewicz does not overcome this deficiency of Carnegie. Minkiewicz does not disclose choosing each of a project type, lifecycle, and a standard, but instead teaches input data of production rate, effort rating, size, and size units. *See, Minkiewicz, col. 11, lns. 45-55.* Responsive to these inputs, the process of Minkiewicz estimates labor hours and a core schedule.

Neither Minkiewicz nor Carnegie disclose the choosing of each of a project type, a lifecycle, and a standard, so it necessarily follows that the references cannot disclose the "using of the type factor, the lifecycle factor, and the standard factors as independent variables in the parametric rule". Indeed, as discussed above, the parametric models of Carnegie and the process of Minkiewicz do not use these three factors as independent variables.

Since Carnegie and Minkiewicz, either alone or in combination, fail to disclose all the elements of claim 1, the applicant respectfully submits that claim

1 can not be rendered obvious by these references. In a similar manner, claims 2-12, 15-21, and 23, which depend from claim 1, can not be rendered obvious.

Response to Rejection of Claims 13 and 14

In paragraph 5 of the office action, the Examiner rejects claims 13 and 14 under 35 USC §103(a) as being unpatentable over Carnegie Mellon Univ. *"Software Engineering Institute Special Report"* (Carnegie) in view of US patent no. 6,073,107 (Minkiewicz) and "Software Estimation", having a URL of www.saspin.org/SASPIN-Apr2001_COCOMO.pdf (Saspin).   The applicant respectfully submits that claims 13 and 14 are allowable base on their being dependent from claim 1, which is now believed to be in a condition for allowance
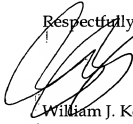
Response to Allowable Subject Matter

In paragraph 6 of the office action, the Examiner finds that claims 22 and 24 have allowable subject matter. Accordingly, applicant rewrites claims 22 and 24 to include all the limitation of the base claim and any intervening claims.

CONCLUSION

Applicant respectfully submits that pending claims 1-24 are now in a condition for allowance. If the Examiner would find it useful, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

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